

Serial No. 10/501,216  
Docket No. 2515LN.eh  
LEN.011

### REMARKS

An excess claim fee payment letter is submitted herewith for two (2) excess dependent claims.

Claims 1-22 are now pending in this application. Claims 1-19 have been amended to more particularly define the invention. The subject matter of original claim 8 has been separated into amended claim 8 and new claim 20. Claims 21 and 22 have been added to assure applicant of the protection to which his invention entitles him.

Claims 1-19 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite, with various purportedly indefinite terms set forth. The above amendments have corrected these, overcoming this rejection.

Claims 1-6 and 9-14 were rejected under 35 U.S.C. §102(b) as being anticipated by Wittek, U.S. Patent No. 3,175,714. Claims 7-8 and 15-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wittek in view of Fuller, U.S. Patent No. 3,813,859. These rejections are respectfully traversed.

The claimed invention is directed to an apparatus for retrieving golf balls. Exemplary embodiments of the apparatus include a plurality of retrieving sections. Each retrieving section includes a frame, one or more receptacle baskets removably supported on the frame, and a retrieving roller having a plurality of retrieving disks. The apparatus further includes a connection rail interconnecting the frames in side-by-side relationship. Over its entire length, the connection rail is readily flexible in the vertical plane and rigid or substantially inflexible in the horizontal plane.

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In some exemplary embodiments, each retrieving section includes a support wheel at substantially the middle of the plurality of retrieving disks. In certain exemplary embodiments, the wheels support the retrieving sections with the plurality of retrieving disks adjacent the ground to lift golf balls from the ground and eject the lifted golf balls into the receptacle baskets as the apparatus moves over the ground.

Wittek discloses an apparatus for retrieving golf balls. Embodiments of Wittek's apparatus include a plurality of retrieving sections, each retrieving section including a frame, a receptacle basket removably supported on the frame, and a plurality of wheels configured to roll over the ground and to retrieve golf balls.. The several retrieving sections are joined by a connection rail interconnecting the frames in side-by-side relationship.

Wittek's Figure 1 embodiment includes a connection rail made up of a first cross channel 56, on either end of which is a further cross channel 130. The cross channels 130, 56, 130 are pivotally interconnected at 132. See Wittek at column 5, lines 34-37.

Fuller discloses a harvesting machine having a cutterbar 22. The cutterbar is flexible in the vertical direction, but resists bending in the horizontal direction. The harvesting machine is not disclosed as having wheels.

The apparatus of the claimed invention has a connection rail 15 which is flexible over its entire length. This enables the connection rail, and thus the retrieving rollers, to adapt to the curvature of the ground as the apparatus moves over the ground, thereby assuring that golf balls in hollows are retrieved.

In contrast, Wittek's connection rail is made up of hingedly connected rigid sections. Although the hinged connections enable each section to incline at a different angle, still the

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connection rail, and so the wheels 30, can not follow the curvature of the ground and retrieve golf balls in hollows.

Fuller's flexible cutterbar follows the curvature of the ground, as depicted in Fuller's Figure 1. However, Fuller discloses no wheels and is from unrelated art. Therefore, there is no suggestion to a person skilled in the art to combine Fuller with Wittek.

Further, in some embodiments of the apparatus of the claimed invention, exemplified by claim 21, each retrieving section includes a plurality of retrieving disks and a support wheel at substantially the middle of the plurality of retrieving disks, as disclosed in Figures 1 and 4 of the drawings. Wittek's apparatus has wheels 30 which both support the retrieving sections on the ground and lift golf balls from the ground.

Although Wittek has support wheels, he does not have retrieving rollers. Wittek's apparatus, with its numerous support wheels, is less maneuverable and is heavier, thus being more likely to have an adverse effect on the ground, particularly soft ground or ground recently soaked with rain. Claim 21 is allowable for this further reason.

In certain embodiments, as set forth in claim 22, applicant's support wheels support the retrieving sections with the retrieving disks adjacent the ground, as also disclosed in Figures 1 and 4. This contributes to the maneuverability of the apparatus and further reduces the likelihood of adversely affecting soft ground. In contrast, in Wittek's apparatus each of the wheels 30 rolls on the ground, as seen from Wittek's Figures 4, 5, and particularly 7, making Wittek's apparatus less maneuverable. Claim 22 is allowable for this further reason.

A Substitute Specification is submitted herewith, together with a marked copy of the original specification as downloaded from the published application. The Substitute

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Specification provides United States format. The undersigned attorney affirms that the Substitute Specification contains no new matter.

A new Abstract is also provided to conform to United States practice.

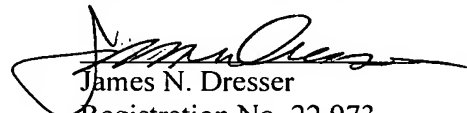
In view of the foregoing, Applicant submits that claims 1-21, all the claims presently pending in the application, are patentably distinct over the prior art of record and are allowable, and that the application is in condition for allowance. Such action would be appreciated.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below to discuss any other changes deemed necessary for allowance in a telephonic or personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. The Commissioner is authorized to charge any deficiency in fees, including extension of time fees, or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,

  
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## Substitute specification

### AN APPARATUS FOR RETRIEVING GOLF BALLS

#### Field of the Invention

The present invention relates to an apparatus ~~according to the preamble to appended claim 1-~~ for retrieving golf balls and the like.

#### Background

The growing expansion of the game of golf places ever higher demands on the auxiliary aids which are required for the rational operation of, above all, practice courses. These practice courses are moreover utilised to an ever increasing degree because of the fact that reasonable levels of golf playing skill on the golf courses themselves require constant practice, to which few have access other than at specifically designed practice courses, so-called driving ranges. Among other things, efficient golf ball retrievers are needed which display high operational reliability and simple construction. The simpler the construction, the higher the operational reliability. In many cases, a simple design and construction also entail a considerable reduction in costs. Prior art apparatuses suffer from relatively complicated design, which entails frequent operational stoppages, and such apparatuses are relatively inefficient in that they often fail to retrieve golf balls because of unevenness in the terrain. For this reason, a large number of golf balls will generally be left out on the course, and in all likelihood many of these remaining golf balls will be pressed down into the ground and can, as a result, not be retrieved by machine but will, in all probability be lost. Golf balls which remain out on the course may also be damaged by lawn mowers and other equipment and may, moreover, entail damage to the lawn mower and the equipment themselves, which may result in considerable repair costs.

#### Summary of the Invention

The task forming the basis of the present invention is to realise a golf ball retriever which

satisfies the above-mentioned needs and desires, without any deterioration in the retrieving efficiency of the apparatus.

~~This task is solved according to the present invention in the apparatus disclosed by way of introduction, in that it is given the characterising features as set forth in appended claim 2.~~

The present invention realises a golf ball retriever displaying an extremely simple and reliable construction, which ensures a high level of operational reliability, without any reduction in the desired retrieving efficiency. Thanks to the vertical flexing capability in the connection rail the different retrieving sections will follow the contour of the ground in an extremely exact and satisfactory manner. Thanks to the horizontal rigidity or inflexibility of the connection rail, the retrieving sections will be steered in an extremely efficient manner, whereby specific coupling devices between the retrieving sections can be omitted.

#### Brief Description of the Drawings

The present invention will now be described in greater detail hereinbelow, with particular reference to the accompanying drawings.

Fig. 1 is a front elevation of an apparatus according to the present invention.

\_\_\_\_ Fig. 2 is a top plan view of the apparatus according to FIG. 1.

\_\_\_\_ Fig. 3 is a side elevation of the apparatus according to FIGS. 1 and 2.

\_\_\_\_ Fig. 4 shows, on a larger scale, the encircled area A of the apparatus according to FIG. 1.

#### Detailed Description of Preferred Embodiments

The apparatus shown on the drawings according to one embodiment of the present invention has three retrieving sections 1, 2 and 3 shown by solid lines, as well as two retrieving sections 4 and 5 shown by broken lines. There is nothing to prevent additional retrieving sections of the same type as the sections 4 and 5 from being connected up with the sections 1 to 5 to form a golf ball retriever with seven or more retrieving sections. Further, it is possible to couple together

only two retrieving sections to form a small, simple golf ball retriever, which may possibly be drawn by hand.

The different retrieving sections 1 to 5 have a frame 6 which extends between a mounting plate 7 and a retrieving roller 8. The retrieving roller 8 consists of a number of retrieving disks 9 which are manufactured from plastic or rubber and which are mounted on one or more rollers, for example a tube of suitable diameter.

The frames 6 of the retrieving sections 1-5 are intended for a number of wire baskets 10 for collecting the golf balls. Ahead of the retrieving roller 8, there is disposed an ejector 11 which has fingers which extend in between the retrieving disks 9 for ejecting golf balls that have fastened between the disks 9 so that the balls arrive in the wire baskets 10. The wire baskets 10 may be of a so-called self-emptying construction, or may quite simply be liftable up out of the frame 6 for emptying into a storage container for subsequent washing or discharge in an automatic ball dispenser. There are both upwardly directed and downwardly directed fingers 12. At the side edges, the retrieving sections 1-5 have guide plates 13 and 14 for guiding golf balls towards the retrieving rollers B.

The retrieving sections 1-5 are mounted on a connection rail 15 by the intermediary of the mounting plate 7. As will be apparent from FIG. 4, the connection rail 15 may consist of a number of sections 15a and 15b which are screwed together to one another, together with the mounting plate 7, and ~~at the same time~~ are mounted on a wheel 16 which advantageously is a swivel wheel. Ahead of the wheel 16, there is disposed a guide plate 17 for guiding possible golf balls away from the wheel 16 so that they are not run over by the wheel. The connection rail 15 shown in FIG. 4 consists of three or four sections which are interconnected, in accordance with FIG. 4, at each mounting plate 7. It is naturally also conceivable that the central section ahead of the centremost retrieving section 2 is of one piece manufacture, while the outer sections of the retrieving sections

4 and 5 are in shorter pieces and are interconnected with the central connection rail at the mounting plates 7 for the sections 1 and 3.

A drawbar 18 is mounted on the connection rail 15 and the mounting plate 7 for the section 2 and carries a wheel 19 of the same type as the wheel 16. Ahead of the wheel 19, there is also disposed a guide plate 20 of the same type as the guide plate 17 ahead of the wheel 16. The drawbar 18 further supports a hitch ball 21. Naturally, this may be replaced by a draw lug, a draw hook or some other type of drawing device for interconnection with a corresponding device on a vehicle of the traction or shunting type.

It is appropriate to provide a wheel 16 for each mounting plate 7 apart from that mounting plate 7 which is screwed together with the drawbar 18 and the connection plate 15 which belongs to the frame 6 of the retrieving section 2. If the connection rail 15 is extremely soft and easily flexible in the vertical direction, it is not only appropriate but also necessary to provide a wheel 16 for the above-mentioned mounting plates 7. This is naturally particularly important in large retrievers with as many retrieving sections 1-5 as five, seven or more.

The connection rail 15 is advantageously manufactured from a resilient material, e.g. duraluminium or spring steel depending on the desired properties. In addition, the connection rail should have a width-thickness ratio of approximately 150:5, when it is manufactured from duraluminium. But other width-thickness ratios are also naturally conceivable, depending on the choice of material and the desired properties. In the application of a larger width-thickness ratio of, for example, 200:2, it may be appropriate to employ a stainless spring steel material. The vital factor is that the connection rail has a great capability to flex and bend in the vertical direction, i.e. in the vertical plane, while at the same time displaying a high degree of rigidity or quite simply being substantially inflexible in the horizontal direction, i.e. in the horizontal plane. The length of the connection rail 15 is defined as the dimension of the connection rail 15 transversely of the



retrieving sections 4 or the extent which is required for interconnecting the retrieving sections 4 in side-by-side relationship. This dimension is also considered as the longitudinal axis of the connection rail 15 and lies in the horizontal plane, while the thickness of the connection rail 15 is its dimension in the vertical plane and the width of the connection rail 15 is its dimension in the horizontal plane at right angles to the longitudinal axis of the connection rail 15.

It will further be apparent from FIG. 4 that the mounting plate 7 from the frame 6 is mounted on the connection rail section 15b, which in its turn is mounted on the connection rail section 15a and thereafter on a wheel mounting plate 22 with the aid of bolts 23 and 24, as well as 25 and 26 which extend through mutually aligned holes in the mounting plate 7, the sections 15a and 15b, and also the wheel mounting plate 22.

The frame 6 is rigidly connected to the mounting plate 7, this rigid connection optimally being a weld. Reinforcement plates 27, 28 are fixedly welded between the mounting plate 7 and the frame 6. The frame 6 extends ahead of the basket or baskets 10 and has shanks on either side of the basket or baskets. The frame shanks extend up to and slightly past the shaft of the retrieving roller 8 where they support brackets 29 for the shaft of the retrieving roller 8. Despite the rigid connection between the mounting plate 7 of the frame 6 and the connection rail 15, the ends of the retrieving roller 8 may move up and down as much as approximately 50-80 mm and even as much as 100 mm and more thanks to the capability of the connection rail 15 to be highly flexible in the vertical direction.

Many modifications are naturally conceivable without departing from the scope of the inventive concept, ~~as this is defined in the appended claims.~~